This listing of claims will replace all prior versions and listings of claims in this application:

b.) Listing of Claims

1. (Canceled)

2. (Canceled)

3. (Currently amended) The method as defined in claim ~~2,~~ 27 wherein the ~~SAW is divided into~~ logical SAW segments~~, preferably~~ are of identical size~~, and the logical SAW segments are allocated to the image field segments~~.

4. (Currently amended) The method as defined in claim ~~2~~ 27 , wherein the logical SAW segments and the image field segments are each indexed, and ~~there is~~ are allocated to the image field segments a combination of SAW segment index and image field segment index, on the basis of which a determination is made of the image field segments to be compared, those image field segments which have an identical combination of SAW segment index and image field segment index ~~preferably~~ being compared with one another.

5. (Currently amended) The method as defined in claim ~~1~~ 27, wherein a comparison of physically adjacent image field segments is performed.

6. (Currently amended) The method as defined in claim ~~1~~ 27,wherein offsets of ~~a~~ the SAW are learned during initializing and are taken into account in determining the allocation.

7. (Currently amended) The method as defined in claim ~~1~~ 27, wherein at least one region that is invalid and that is blanked out upon comparison of the image field segments can be defined within ~~a~~ the SAW and/~~or~~ ~~a~~ the imaged SAW segment, in which context ~~the~~ a validity can depend on the position of the SAW on ~~a~~ the wafer.

8. (Currently amended) The method as defined in claim ~~1~~ 27, wherein a line camera ~~or an area camera~~ is used, to acquire ~~a~~ microscopic ~~or macroscopic~~ images

9. (Currently amended) The method as defined in claim ~~1~~ 27, wherein a line camera is used, which can acquire microscopic ~~or macroscopic~~ images, and the wafer is illuminated with a continuous light source.

10. (Currently amended) The method as defined in claim ~~1~~ 27, wherein an area camera is used, which can acquire microscopic ~~or macroscopic~~ images.

11. (Currently amended) The method as defined in claim ~~1~~ 27, wherein a relative motion of the wafer with respect to the camera occurs~~, and is preferably continuous~~.

12. (Currently amended) The method as defined in claim 11, wherein an image is acquired by way of a flash that is triggered, with ~~the~~ a diaphragm open, as a function of the relative position of the wafer.

13. (Currently amended) An apparatus for ~~the~~ an analysis of surface images of at ~~lest~~ least one wafer, wherein the at least one wafer has features that are generated using a "stepper area window" (SAW) ~~SAW~~, the apparatus comprising:

a camera to acquire a plurality of images of the at least one wafer, wherein the camera defines an image field;

a memory region in which the plurality of images of the wafer, acquired with the camera, are storable;

means for initializing in a learning phase in which the image field of the camera is divided into SAW-segment-imaging image field segments in such a way that after a definable interval of acquired images, a repetition of an identical allocation of imaged SAW segments in image field segments occurs; and

a processing unit for carrying out comparison operations in such a way that in the image field segments of images that have an identical allocation of image field

segments to imaged SAW segments are compared with one another and/or with a specific model.

14. (Currently amended) The apparatus as defined in claim 13, wherein the memory region is managed, by means of an array and ~~/or~~ a hash function, in such a way that the ~~logical~~ imaged SAW segments and the image field segments are each indexed, and ~~there is~~ are allocated to the image field segments a combination of SAW segment index and image field segment index, on the basis of which a determination is made of the image field segments to be compared, those image field segments which have an identical combination of SAW segment index and image field segment index ~~preferably~~ being compared with one another.

15. (Currently amended) The apparatus as defined in claim 13, wherein ~~a device of~~ the processing unit compares only physically adjacent image field segments with one another on ~~the~~ basis of a metric.

16. (Currently amended). The apparatus as defined in claim 13, wherein the means for initializing in the learning phase are configured to learn offsets of a the SAW in the initialization phase and to account for upon determination of the allocation.

17. (Canceled)
18. (Canceled)
19. (Canceled)
20. (Canceled)
21. (Canceled)
22. (Canceled)
23. (Canceled)
24. (Canceled)
25. (Canceled)
26 (Canceled)

27. (New) A method for analyzing a patterned semiconductor wafer, wherein a specific number of dice are exposed with one "stepper area window" (SAW) using an identical mask to expose the patterned semiconductor wafer with a plurality of SAWs, comprising the steps of:

- dividing the SAW in a plurality of logical SAW segments,
- initializing in a learning phase an image field of a camera, wherein the image field of the camera is divided by way of an interactive control system into a plurality SAW image field segments in such a way that after a definable interval of acquired image fields a repetition of an identical allocation of imaged SAW image field segments occurs;
- allocating the logical SAW segments to image field segments, in such a way that as the camera travels over the wafer an identical allocation of logical SAW segments to image field segments occurs at a definable travel interval and image interval;
- moving the camera with the image flied relative to the wafer and thereby acquiring a plurality of images wherein the plurality of images cover the entire wafer;
- digitally storing the acquired images; and
- carrying out comparison operations in run phases, in which the image field segments of images that have an identical allocation of image field segments to imaged SAW segments are compared with one another and with a specific master.

28. (New) A method for analyzing a patterned semiconductor wafer, wherein a specific number of dice are exposed with one "stepper area window" (SAW) using an identical mask to expose the patterned semiconductor wafer with a plurality of SAWs, comprising the steps of:

- dividing the SAW in a plurality of logical SAW segments,
- initializing in a learning phase an image field of a camera, wherein the image field of the camera is divided by way of an interactive control

system into a plurality SAW image field segments in such a way that after a definable interval of acquired image fields a repetition of an identical allocation of imaged SAW image field segments occurs;

- allocating the logical SAW segments to image field segments, in such a way that as the camera travels over the wafer an identical allocation of logical SAW segments to image field segments occurs at a definable travel interval or image interval;
- moving the camera with the image flied relative to the wafer and thereby acquiring a plurality of images wherein individual image fields cover the entire wafer;
- digitally storing the acquired images; and
- carrying out comparison operations in run phases, in which the image field segments of images that have an identical allocation of image field segments to imaged SAW segments are compared with one another with a specific master.

29. (New) The method as defined in claim 27, wherein an area camera is used, to acquire a microscopic or macroscopic images.

30. (New) The method as defined in claim 27, wherein a line camera is used, which can acquire macroscopic images, and the wafer is illuminated with a continuous light source.

31. (New) The apparatus as defined in claim 13, wherein the memory region is managed, by means of a hash function, in such a way that the logical SAW segments and the image field segments are each indexed, and are allocated to the image field segments a combination of SAW segment index and image field segment index, on the basis of which a determination is made of the image field segments to be compared, those image field segments which have an identical combination of SAW segment index and image field segment index preferably being compared with one another.

32. (New) The method as defined in claim 27, wherein a line camera is used, to acquire a macroscopic images.

33. (New) The method as defined in claim 27, wherein an area camera is used, which can acquire macroscopic images.

34. (New) The method as defined in claim 27, wherein a relative continuous motion of the wafer with respect to the camera occurs.